

What is claimed is:

1. In the fabrication of an integrated circuit, a method for removing etching assist gas from a fabrication system used during defect repair of a photomask, comprising:
  - (a) inspecting the photomask and detecting a defect, said defect in a defect region; and
  - (b) repairing said defect, wherein an amount, effective for the purpose of styrene is added to the system.
2. The method as recited in claim 1, wherein the etching assist gas is xenon fluoride.
3. The method as recited in claim 1, wherein the amount of styrene added to the etching assist gas is about 0.8 torr.
4. The method as recited in claim 1, wherein the defects are opaque defects.
5. The method as recited in claim 1, wherein the etching assist gas is used with ion beam scan during photomask repair.
6. A method for reducing surface defects present on a photomask in an integrated circuit fabrication system, comprising:
  - (a) inspecting the photomask and detecting a defect, said defect in a defect region; and
  - (b) repairing said defect, wherein an amount, effective for the purpose of styrene is added to the system.

7. The method as recited in claim 6, wherein the etching assist gas is xenon fluoride.

8. The method as recited in claim 6, wherein the amount of styrene added to the etching assist gas is about 0.8 torr.

9. The method as recited in claim 6, wherein the defects are opaque defects.

10. The method as recited in claim 6, wherein the etching assist gas is used with ion beam scan during photomask repair.

11. A method for reducing gas remaining on an MOS film of a photomask in an integrated circuit fabrication system, comprising:

- (a) inspecting the photomask and detecting a defect, said defect in a defect region; and
- (b) repairing said defect, wherein an amount, effective for the purpose of styrene is added to the system.

12. The method as recited in claim 11, wherein the etching assist gas is xenon fluoride.

13. The method as recited in claim 11, wherein the amount of styrene added to the etching assist gas is about 0.8 torr.

14. The method as recited in claim 11, wherein the defects are opaque defects.

15. The method as recited in claim 11, wherein the etching assist gas is used with  
ion beam scan during photomask repair.